UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAMES R. HUSTON and JINSUK KANG

Appeal No. 2005-1855
Application No. 09/737,418[1]

ON BRIEF

Before BARRY, LEVY, and SAADAT, Administrative Patent Judges.
SAADAT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the Examiner's final rejection of claims 1-10, 12-21 and 23-25. Claims 11 and 22 have been canceled.

We affirm.

BACKGROUND

Appellants' invention is directed to methods and systems for driving a display for generating color and grayscale images. An

[1] Application for patent filed December 14, 2000, which claims the filing priority benefit under 35 U.S.C. § 119 of the provisional Applications No. 60/197,133, filed April 14, 2000.

understanding of the invention can be derived from a reading of exemplary independent claim 1, which is reproduced as follows:

> 1. A method for driving display, comprising the steps of:
>
> storing a voltage value in an analog memory associated with each pixel of a display, each of the pixels having a first and a second optical state;
>
> comparing a reference voltage having values that change in time to the voltage values stored in each of the analog memories associated with each of the pixels; and
>
> changing the optical state of each of the pixels when the respective voltage values match the reference voltage values.

The Examiner relies on the following references:

Huang et al. (Huang)	5,965,907	Oct. 12, 1999
Akiyama et al. (Akiyama)	5,977,940	Nov. 2, 1999
Nakao	6,437,716	Aug. 20, 2002 (filed Dec. 8, 2000)

Claims 1-7 and 12-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Akiyama.

Claims 8-10 and 19-21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Akiyama and Huang.

Claims 23-25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Akiyama and Nakao.

Rather than reiterate the opposing arguments, reference is made to the brief and answer for the respective positions of Appellants and the Examiner. Only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants could have made but chose not to make in the brief have not been considered (37 CFR § 41.67(c)(1)(vii)).

OPINION

At the outset, we note that Appellants indicate that all the claims stand or fall together (brief, page 4). We therefore, address the claim rejections as they relate to different grounds of rejection and treat claims 1, 8 and 23 as the representative claims of their corresponding groups.

With respect to the rejection of claim 1, Appellants argue that time duration is not a factor in Akiyama in generating the gray scale (light intensity) from the pixels of the LCD (brief, page 5). Additionally, Appellants assert that the reference fails to teach or suggest the step of comparing a reference voltage that changes in time to a voltage value that represents a desired gray scale for each pixel (id.). Appellants further point out that nowhere in Akiyama changing the optical state of a pixel based upon a comparison of a time changing reference

voltage and an analog voltage representative of a gray scale is taught or suggested (brief, page 7).

In response to Appellants' arguments, the Examiner asserts that although Akiyama may not disclose that the switching of the pixels produces a gray scale, the claims do not require such feature (answer, page 6). The Examiner further reasons that the claims merely require that the pixels have two binary optical states achieved according to the value of the reference voltage, which is disclosed by the reference (answer, page 7).

Before addressing the Examiner's rejections based upon prior art, it is an essential prerequisite that the claimed subject matter be fully understood. The claim construction analysis begins with the words of the claim. See Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582, 39 USPQ2d, 1573, 1576 (Fed. Cir. 1996). Claims will be given their broadest reasonable interpretation consistent with the specification, and limitation appearing in the specification are not to be read into the claims. In re Etter, 756 F.2d 852, 858, 225 USPQ 1, 5 (Fed. Cir. 1985). Accordingly, we will initially direct our attention to Appellants' claim 1 to derive an understanding of the scope and content thereof.

Claim 1 is directed to a method for driving a display where each pixel may have a first and a second optical state. Although Appellants argue that the voltage values that represent the gray scale of the pixels are converted into a time duration for the pixels (brief, pages 7 & 8), the claims do not refer to any time duration and only recite changing the optical state of the pixels. Therefore, as asserted by the Examiner, the alleged distinctions made by Appellants with respect to the gray scale of a pixel are not recited limitations in the claims.

We also disagree with Appellants' arguments that Akiyama lacks the teaching or suggestion with respect to comparison of a time changing reference voltage and a stored analog voltage. Akiyama teaches that the voltage of data signals is stored in storage capacitors (col. 10, lines 8-13) and is compared to the reference voltage V_{ref} which is a ramped wave of 120 Hz and therefore, changes over time (Figure 2(a); col. 10, lines 36-49).

Based on these findings, we remain unconvinced by Appellants that modifying Akiyama would not have suggested the claimed invention because the reference does not disclose the pixel voltage representing a gray scale. As discussed above, claim 1 merely requires that the optical state of a pixel be changed based on comparing its stored voltage value with a time varying

reference voltage, which is suggested by Akiyama. Thus, we find the Examiner's reliance on the Akiyama to be reasonable and sufficient to support a prima facie case of obviousness and sustain the 35 U.S.C. § 103 rejection of claims 1-7 and 12-18, grouped together with claim 1.

The decision of the examiner to reject claims 8-10 and 19-21 over Akiyama and Huang and claims 23-25 over Akiyama and Nakao under 35 U.S.C. § 103 is also sustained since Appellants have not challenged these rejections with any reasonable specificity, thereby allowing the claims to fall with claim 1 (see In re Nielson, 816 F.2d 1567, 1572, 2 USPQ2d 1525, 1528 (Fed. Cir. 1987)).

CONCLUSION

In view of the foregoing the decision of the Examiner rejecting claims 1-10, 12-21 and 23-25 under 35 U.S.C. § 103 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv).

AFFIRMED

LANCE LEONARD BARRY
Administrative Patent Judge

STUART S. LEVY
Administrative Patent Judge

MAHSHID D. SAADAT
Administrative Patent Judge

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